

Application No. 09/008,525
Docket No. 2557-000048/US

REMARKS

Support for new claims 44 – 55 is found throughout the specification and in Figs. 4 – 12. Accordingly, no question of new matter arises and entry of new claims 44 – 55 is respectfully submitted.

Claims 1 – 3 and 16 – 18 and 44 – 55 are before the Examiner for consideration.

Election/Restriction

The Examiner has acknowledged Applicants' election of embodiment 1 described in Figs. 4 – 7 and the Response to the Election/Restriction Requirement filed on February 13, 2003. However, the Examiner has found Applicants' arguments unpersuasive for various reasons. In particular, the Examiner asserts that the five species recited in the Restriction Requirement dated January 13, 2003, appear to be independent as claimed. For example, the Examiner asserts that species 2 of Fig. 8 is different from species 1 of Figs. 4 – 7 because the oxidation preventing layer of species 2 is formed to be thicker on the sidewalls and on the top of the bit lines than on the first insulating layer whereas the oxidation preventing layer of species 1 is formed conformal on the entire surface of the bit lines and the first insulating layer. In addition, the Examiner asserts that the inventions are located in different statutory classes which have different case law basis for examination. Further, the Examiner asserts that if the inventions were not restricted, if one of the inventions were held to be unpatentable, then the other inventions would also be inherently held to be unpatentable. The Examiner concludes that restriction is proper because there are five different inventive concepts in making the device and in the device itself. Accordingly, the Examiner has made the election/restriction final and has withdrawn claims 4 – 15 and 19 – 43.

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Applicants hereby reserve the right to file a Petition to the Commissioner under 37 C.F.R. § 1.144 to review the election/restriction and preserve this right until after a final Office Action or allowance of the claims corresponding to the elected species. In addition, Applicants offer the following comments for reconsideration of the election/restriction.

Applicants note initially that the Examiner has restricted the application into five species which correspond to the five embodiments described in the specification. Applicants have set forth the species designated by the Examiner together with what Applicants submit to be a brief description of the alleged species, the Figures that correspond to the alleged species, and the claims that correspond to the alleged species in Table 1 below.

Table 1

Species/ Embodiment	Brief Description of Species	Corresponding Figures	Corresponding Claims
1	oxidation preventing layer is located on the first insulating layer	4 - 7	1 - 3 and 16 - 18
2	oxidation preventing layer is located on the first insulating layer and is thicker on the bit lines	8	1 and 4
3	formation of dual spacer to reduce oxidation of the bit lines	9 - 10	19 - 23
4	oxidation preventing layer is located on the first insulating layer and is a nitride layer	11	1, 2 and 5 - 15
5	oxidation preventing layer is located on the second insulating layer and storage electrode	12	24 - 35

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Applicants submit that claim 1 encompasses alleged species 1, 2 and 4. Thus, claim 1 is a generic claim, at least with respect to species 1, 2 and 4. Once a generic claim is determined to be allowable, all of the claims drawn to species in addition to the elected species which include all the limitations of the generic claim will be allowable since the additional species will depend thereon or otherwise include the limitations of the generic claim. (*See, e.g.*, MPEP § 806.04(d)). Therefore, if claim 1 is found to be allowable, claims directed to non-elected species 2 and 4 should no longer be withdrawn and should also be deemed allowable because they are fully embraced by the generic claim (*see, e.g.*, MPEP § 809.02(c)).

With respect to the Examiner's reasons for maintaining the election/restriction, Applicants submit that the Examiner has not given any valid reason to maintain the election/restriction. For example, the Examiner asserts that the five species are different and indicates in his reasons for maintaining the election/restriction that species 2 is different from species 1 because the oxidation preventing layer of species 2 is thicker on the bit lines than the oxidation preventing layer of species 1. Claims that are to be restricted to different species must be mutually exclusive (*see, e.g.*, MPEP § 806.04(f)). As seen above in Table 1, the claims corresponding to species 2 (*i.e.*, claims 1 and 4) overlap the claims corresponding to species 1 (*i.e.*, claims 1 – 3 and 16 – 18). Therefore, the claims corresponding to species 1 and 2 are not mutually exclusive. In addition, it can be seen from Table 1 that claim 2 reads on both species 1 and species 4. Thus, the claims corresponding to species 1 and 4 are not mutually exclusive. Additionally, species 1, 2 and 4 all contain an oxidation preventing layer on the first insulating layer. Because the claims corresponding to species 1 and 2 and the claims corresponding to species 1 and 4 are not mutually exclusive (and because claim 1 reads on all of species 1, 2 and 4

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as discussed above), the size, thickness, and/or composition of the oxidation preventing layer is not a reason for election/restriction as the Examiner contends.

In addition, Applicants submit that species 5 contains the oxidation preventing layer on the second insulating layer and the storage electrode. Applicants submit that when the Examiner searches the oxidation preventing layer of the elected species, he would necessarily search the art pertaining to the oxidation preventing layer of species 5. Applicants therefore submit that it is not an undue burden on the Examiner to search the art pertaining to species 5. Thus, Applicants submit that species 5 should be examined with elected species 1.

Further, Applicants submit that species 3 includes a dual spacer formed of a nitride layer and an oxide layer as the oxidation preventing layer. As described in the specification at page 13, lines 16 – 18, the nitride layer reduces the oxidation of the bit lines. Applicants submit that in searching the oxidation preventing layer of species 1, which also reduces the oxidation of the bit lines, the Examiner will have searched the art pertaining to the dual spacer layer (*e.g.*, oxidation preventing layer) of species 3. As a result, Applicants submit that searching the art pertaining to species 3 would not be an undue burden for the Examiner. Therefore, Applicants submit that the Examiner should examine species 3 with the elected species.

The Examiner also asserts that the inventions are in different statutory classes which have different case law basis for examination. Applicants do not understand the Examiner's statement. Case law is not restricted to certain classes for examination. Moreover, all of the classes and subclasses as determined by the U.S. Patent and Trademark Office are examined in the same manner.

Further, the Examiner asserts that the election/restriction is proper because "non-restriction would mean that if one of the inventions were held to be unpatentable, then the others

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would be inherently held to be unpatentable.” In a proper election/restriction, the species are mutually exclusive and patentably distinct from each other. (*See, e.g.*, MPEP § 806.04(f)). However, as discussed above, the claims corresponding to species 1, 2 and 4 are not mutually exclusive. Thus, for example, if claim 1 (corresponding at least to species 1) is found to be unpatentable, claims corresponding to species 2 (*e.g.*, claim 4) and claims corresponding to species 4 (*e.g.*, claims 2 and 9 – 15) would also be found to be unpatentable since claims 2, 4 and 9 – 15 are fully embraced by claim 1. Thus, a restriction, at least with respect to the claims corresponding to species 1, 2 and 4 is improper.

In view of the above, the election/restriction is believed to be improper and Applicants respectfully request that the restriction be reconsidered and withdrawn, or at least modified such that at least the claims corresponding to species 1, 2, 4 and 5 are examined in one application.

Rejection under 35 U.S.C. §103(a)

Claims 1 - 3 and 16 – 18 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Applicants’ admitted prior art in view of Park. Applicants respectfully traverse this rejection in view of the following remarks.

Applicants submit that the Examiner’s cited reference is not a valid prior art reference against the present application. In the Election/Restriction dated January 13, 2003, and in the outstanding Office Action, copies of which are attached hereto for the Examiner’s convenience, the filing date is indicated as being June 29, 2003. However, Applicants submit that the correct filing date for the above-identified application is January 16, 1998.

In the above-identified application, the specification, claims, and drawings were filed on January 16, 1998, as shown by the attached copy of the Utility Application Transmittal papers,

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Certificate of Mailing by Express Mail, and postcard. As shown in the attached postcard and Response to Notice To File Missing Parts, the Declaration and Power of Attorney and Assignment were filed on June 29, 1998. According to 37 C.F.R. § 1.53(b) and 35 U.S.C. § 111(a), the filing date of a non-provisional application is the date on which a specification, at least one claim, and any required drawings are filed in the U.S. Patent and Trademark Office. The filing of a Declaration and Power of Attorney in an application is not a requirement for receiving a filing date. Thus, Applicants submit that Applicants fulfilled the requirements necessary to receive a filing date on January 16, 1998, and that the correct filing date of this application is January 16, 1998. Moreover, the Notice to File Missing Parts (*Filing Date Granted*) dated April 15, 1998, and the Official Filing Receipt indicate that this application has a filing date of January 16, 1998¹.

Applicants further submit that the present application has a filing date that is prior to the filing date of Park (*i.e.*, prior to June 5, 1998). As a result, Park is not a valid prior art reference for this application. Consequently, this rejection must fail.

In addition, Applicants submit that claim 1 is a generic claim with respect to species 1, 2 and 4. Once a generic claim is determined to be allowable, all of the claims drawn to species in addition to the elected species which include all the limitations of the generic claim will be allowable since the additional species will depend thereon or otherwise include the limitations of the generic claim. (*See, e.g.*, MPEP § 806.04(d)). Therefore, because claim 1 contains allowable subject matter, claims directed to non-elected species 2 and 4 (*i.e.*, claims 4 – 15) should no

¹ A copy of the Notice to File Missing Parts (*Filing Date Granted*) dated April 15, 1998 and the Official Filing Receipt are attached hereto for the Examiner's convenience.

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longer be withdrawn and should also be deemed allowable because they are fully embraced by the generic claim (*see, e.g.*, MPEP § 809.02(c)).

In view of the above, Applicants submit that the present invention is not obvious over the admitted prior art in view of Park and respectfully request that the Examiner reconsider and withdraw this rejection and pass claims 1 – 15 to issuance.

Addition of New Claims 44 – 55

Applicants have added new claim 44 which broadly and generically encompasses each of the five species defined in the in the Election/Restriction (and in the specification). Thus, claim 44 is a generic claim for species 1 – 5. Dependent claims 45 – 55 claim specific features of the five species. Accordingly, Applicants respectfully request that the Examiner search generic claim 44 on the merits.

CONCLUSION

In light of the above, Applicants believe that this application is now in condition for allowance and therefore request favorable consideration.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

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Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By *J. Brummett (41,646) fa*
John A. Castellano, Reg. No. 35,094

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

JAC/ALM

Applicant: Young-won PARK et al.	Case No.: 2557-000048/US
Serial No.: 09/008,525	Filing Date: June 29, 1998
Title: SEMICONDUCTOR MEMORY DEVICE AND METHOD OF MANUFACTURING FOR PREVENTING BIT LINE OXIDATION	
Please acknowledge receipt of: Transmittal Fee Transmittal Amendment Check for \$300.00 #12575	
	
By stamping and returning to Harness, Dickey & Pierce, P.L.C.	
Due: 7/23/03	Attorney: John A. Castellano
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